

# MARY JACKSON

Mary Jackson (b. 1921) grew up in Virginia and graduated college with a Bachelor's degree in math and physics. After spending part of her early career as a teacher, she changed paths to become a "computer" (or mathematician) for the National Advisory Committee for Aeronautics (NACA), which later morphed into the National Aeronautics and Space Administration (NASA). Jackson worked on data from wind tunnel experiments as well as data from aircraft and aeronautics experiments.

U.S. Air Force Colonel, chemist and astronaut Cady Coleman (b. 1960) helped deploy NASA's Chandra X-ray Observatory into space in 1999 and has since spent about 180 days aboard the International Space Station. Coleman cites that it wasn't until she was in college when astronaut Sally Ride came to talk that she first became interested in being an astronaut.

National Aeronautics and  
Space Administration



# CADY COLEMAN

[www.nasa.gov](http://www.nasa.gov)

illustration: Kristin DiVona

[chandra.si.edu/women](http://chandra.si.edu/women)





# GRACE HOPPER

Working as a Rear Admiral in the Navy and as a computer scientist, Grace Hopper (b. 1906) was a leader in the nascent computer programming and software development fields. She is known to have developed the computer programming language compiler. In 1934, Hopper was one of the first women to earn a Ph.D. from Yale in mathematics.

During her career, Annie Easley (b. 1933) participated in the evolution from the “human computer” to computer programming at what today is NASA’s Glenn Research Center in Ohio. She developed code used in researching energy-conversion systems, analyzing alternative power technology. Easley was a mentor and role model to many through her actions and successes.

# ANNIE EASLEY

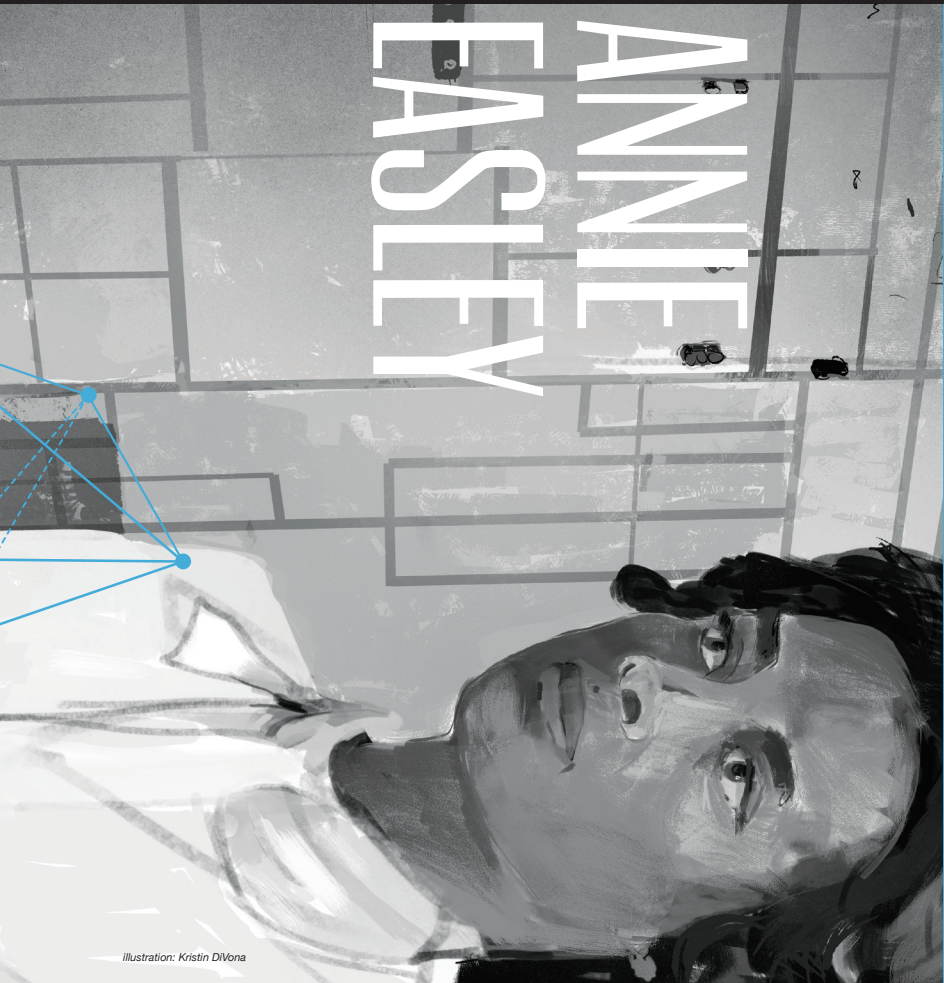
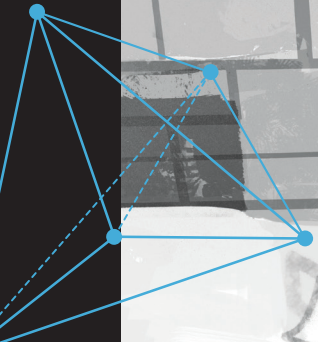


Illustration: Kristin DiVona







# KATHERINE JOHNSON

Katherine Coleman Goble Johnson (b.1918) is an African-American space scientist and mathematician who calculated space flight trajectories for critical NASA projects such as the 1969 Apollo 11 trip to the Moon. Johnson was known for her mathematical accuracy and was asked to double check the computer-based calculations on major space flight missions.

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# EILEEN COLLINS



illustration: Kristin Divena

When Eileen Collins (b.1956) joined the Air Force Reserve Office Training Corp (ROTC), women were not allowed to be pilots. Fortunately, that changed in 1976 while Collins was working on her undergraduate degree in math and economics. After spending over a decade at the Air Force, Collins was selected to the astronaut corps in 1990. She became the first female pilot of NASA's Space Shuttle in 1993 and the first female commander of a NASA space mission in 1997.

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[chandra.sai.edu/women](http://chandra.sai.edu/women)





Melba Roy Mouton (b. 1929) was a mathematician and computer programmer in NASA's Trajectory and Geodynamics Division, acting as the Assistant Chief of Research Programmes. Mouton worked at NASA's Goddard Space Flight Center, coding computer programs to calculate the trajectories and locations of various aircraft.

# MELBA ROY



Illustration: Kristin DiVona



Illustration: Kristin DiVona

# HYPATIA

Hypatia (born in 350) was known as a great thinker in her age. She was one of the earliest women to be a noted astronomer, mathematician and philosopher in ancient Greece and Egypt, and was also the head of an important school in Alexandria. Unfortunately, in 415, Hypatia was killed in the streets by a mob during a time of religious unrest.





Augusta Ada Byron, Countess of Lovelace, usually referred to as Ada Lovelace, was born in London on December 10, 1815, and was the noted daughter of the poet Lord Byron. Ada showed a promising gift for mathematics at an early age and was greatly encouraged by her mother. As a colleague of Charles Babbage, she became known for her work on and ideas around his concept of the mechanical computer. Lovelace is now considered the first computer programmer.

# ADA LOVELACE



Illustration:  
Kristin DeVera

# WOMEN IN STEM

It wasn't until I went to college and Sally Ride came to talk—it just opened up that possibility of if she could do it then I could aspire to do it too."

**Cady Coleman**  
chemist, retired United States Air Force officer, and NASA astronaut

We celebrate women in STEM, (Science, Technology, Engineering and Math) both acknowledged and unknown, for their role in the exploration of the world and Universe around us.

The history of women's contributions to the fields of science, technology, engineering, and math (STEM) is long and varied, but it has also often been underrepresented. This series highlights only a very few of the women who have made important discoveries and have had a crucial impact on STEM fields. Today, women are in every STEM discipline, in every type of job, and represent the widest range of background and experiences.